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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,738	09/28/2000	Yukio Tanaka	SEL 216	7356

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EXAMINER

ALPHONSE, FRITZ

ART UNIT PAPER NUMBER

2675

DATE MAILED: 06/19/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/672,738

Applicant(s)
Yukio Tanaka

Examiner
Fritz Alphonse

Art Unit
2675



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 28, 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hebiguchi (U.S. Pat. No. 6,225,967).

Regarding claim 1, Hebiguchi teaches about a display device (figs. 1, 2) comprising: a pixel portion (11a-c) in which pixels, each including at least one TFT (i.e., switching transistor T in figure 2), are arranged in matrix form; a source driver (Sd₁) for supplying video signals to source signal lines S₁. Hebiguchi teaches about a first gate driver (Gd₁) for supplying selection signals to first gate signal lines (G₁, G₃); and a second gate driver (Gd₄) for supplying selection signals to second gate signal lines (G₂, G₄). The pixels connected to the source signal lines S₁ (e.g., see figure 2) are supplied with the selection signals from the first gate signal lines (Gd₁); the pixels connected to the source signal lines S₂ are supplied with the selection signals from the second gate signal lines (Gd₂); the selection signal starts to be supplied to the second gate signal line (Gd₂) while the selection signal is supplied to the first gate signal line (Gd₁); and the selection signal starts to be supplied to the first gate signal line (Gd₁) while the selection signal is supplied to the second gate signal line (Gd₂).

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Hebiguchi does not explicitly disclose a display device comprising a source driver for supplying video signals to $2n$ source signal.

However, this is very obvious because the structure of Hebiguchi's matrix display apparatus has the capability to supply video signals to a plurality of source signal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a source driver for supplying video signals to $2n$ source signal. Doing so would provide images which have excellent intermediate gradation, thereby, high quality image with less unevenness can be obtained.

As to claim 2, the claim differs from claim 1 only in that the limitation "the selection signals are sequentially supplied to the first gate signal line G1L, the second gate signal line G1R, the first gate signal line G2L, the second gate signal line G2R". However, these limitations are disclosed by Hebiguchi (col. 2, lines 61 through col. 3 line 5).

As to claims 23-24, method claims 23-24 correspond to apparatus claims 1 and 2. Therefore, they are analyzed as previously discussed in claims 1 and 2 above.

3. Claims 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hebiguchi in view of Akebi (U.S. Pat. No. 5,825,342).

As to claims 3-10, Hebiguchi does not teach a projector comprising two to three display devices. However, this limitation is disclosed by Akebi (col. 5, lines 32-50; col. 10, lines 31-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hebiguchi by specifically providing a projector including a plurality of liquid crystal displays, as disclosed by Akebi. By doing so, the projector can use the liquid crystal

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displays of one type in common without degrading display quality, upsizing the projector, complicating the cooling mechanism.

4. Claims 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hebiguchi in view of Yamazaki (U.S. Pat. No. 6,384,86).

As to claims 11-22, Hebiguchi does not teach a head mount display, a computer, a video camera, a DVD player or a display device comprising a display device. However, these limitations are disclosed by Yamazaki (see figures 13A-j).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the active matrix display as taught by Yamazaki. The motivation would have been a desire to use a liquid crystal display that is inexpensive to produce and a high degree of scattering.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Okumura (U.S. Pat. No. 5,568,163) discloses a computer input device for use in conjunction with a mouse input device.

Suzuki (U.S. Pat. No. 6,037,923) discloses an active matrix display device.

Jinno et al. (U.S. Pat. No. 6,163,310) discloses a display apparatus with built-in driver.

Hirakata (U.S. Pat. No. 6,243,064) discloses a method of driving an active matrix type liquid-crystal display unit.

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Mori (U.S. Pat. No. 6,345,894) discloses a color projector to produce a bright and homogeneous color projection image.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703) 308-8534.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks


Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


F. Alphonse

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May 31, 2002


CHANH NGUYEN
PRIMARY EXAMINER